

# BHAVANA CK

## 1BM20CS403

### CSE-4A

#### **Program 10**

Consider the schema for College Database:

STUDENT (*USN, SName, Address, Phone, Gender*)

SEMSEC (*SSID, Sem, Sec*)

CLASS (*USN, SSID*)

SUBJECT (*Subcode, Title, Sem, Credits*)

IAMARKS (*USN, Subcode, SSID, Test1, Test2, Test3, FinalIA*)

Write SQL queries to

1. List all the student details studying in fourth semester 'C' section.
2. Compute the total number of male and female students in each semester and in each section.
3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects.
4. Categorize students based on the following criterion:

If FinalIA = 17 to 20 then CAT = 'Outstanding'

If FinalIA = 12 to 16 then CAT = 'Average'

If FinalIA < 12 then CAT = 'Weak'

Give these details only for 8th semester A, B, and C section students.

```
CREATE DATABASE COLLEGEDB;  
USE COLLEGEDB;
```

```
CREATE TABLE STUDENT (  
USN VARCHAR (10),
```

```
SNAME VARCHAR (25),  
ADDRESS VARCHAR (25),  
PHONE LONG,  
GENDER CHAR (1),  
PRIMARY KEY (USN));
```

```
CREATE TABLE SEMSEC (  
SSID VARCHAR (5),  
SEM INT,  
SEC CHAR (1),  
PRIMARY KEY (SSID));
```

```
CREATE TABLE CLASS (  
USN VARCHAR (10),  
SSID VARCHAR (5),  
PRIMARY KEY (USN, SSID),  
FOREIGN KEY (USN) REFERENCES STUDENT (USN),  
FOREIGN KEY (SSID) REFERENCES SEMSEC (SSID));
```

```
CREATE TABLE SUBJECT (  
SUBCODE VARCHAR (8),  
TITLE VARCHAR (20),  
SEM INT,  
CREDITS INT,  
PRIMARY KEY (SUBCODE));
```

```
CREATE TABLE IAMARKS (  
USN VARCHAR (10),  
SUBCODE VARCHAR (8),  
SSID VARCHAR (5),  
TEST1 INT,
```

TEST2 INT,  
TEST3 INT,  
FINALIA INT,  
PRIMARY KEY (USN, SUBCODE, SSID),  
FOREIGN KEY (USN) REFERENCES STUDENT (USN),  
FOREIGN KEY (SUBCODE) REFERENCES SUBJECT  
(SUBCODE),  
FOREIGN KEY (SSID) REFERENCES SEMSEC (SSID));

INSERT INTO STUDENT VALUES  
('1RN13CS020','AKSHAY','BELAGAVI', 8877881122,'M');  
INSERT INTO STUDENT VALUES  
('1RN13CS062','SANDHYA','BENGALURU',  
7722829912,'F');  
INSERT INTO STUDENT VALUES  
('1RN13CS091','TEESHA','BENGALURU', 7712312312,'F');  
INSERT INTO STUDENT VALUES  
('1RN13CS066','SUPRIYA','MANGALURU',  
8877881122,'F');  
INSERT INTO STUDENT VALUES  
('1RN14CS010','ABHAY','BENGALURU', 9900211201,'M');  
INSERT INTO STUDENT VALUES  
('1RN14CS032','BHASKAR','BENGALURU',  
9923211099,'M');  
INSERT INTO STUDENT VALUES  
('1RN14CS025','ASMI','BENGALURU', 7894737377,'F');  
INSERT INTO STUDENT VALUES  
('1RN15CS011','AJAY','TUMKUR', 9845091341,'M');  
INSERT INTO STUDENT VALUES  
('1RN15CS029','CHITRA','DAVANGERE', 7696772121,'F');

```
INSERT INTO STUDENT VALUES
('1RN15CS045','JEEVA','BELLARY', 9944850121,'M');
INSERT INTO STUDENT VALUES
('1RN15CS091','SANTOSH','MANGALURU',
8812332201,'M');
INSERT INTO STUDENT VALUES
('1RN16CS045','ISMAIL','KALBURGI', 9900232201,'M');
INSERT INTO STUDENT VALUES
('1RN16CS088','SAMEERA','SHIMOGA', 9905542212,'F');
INSERT INTO STUDENT VALUES
('1RN16CS122','VINAYAKA','CHIKAMAGALUR',
8800880011,'M');
Select * from STUDENT;
```

```
INSERT INTO SEMSEC VALUES ('CSE8A', 8,'A');
INSERT INTO SEMSEC VALUES ('CSE8B', 8,'B');
INSERT INTO SEMSEC VALUES ('CSE8C', 8,'C');
INSERT INTO SEMSEC VALUES ('CSE7A', 7,'A');
INSERT INTO SEMSEC VALUES ('CSE7B', 7,'B');
INSERT INTO SEMSEC VALUES ('CSE7C', 7,'C');
INSERT INTO SEMSEC VALUES ('CSE6A', 6,'A');
INSERT INTO SEMSEC VALUES ('CSE6B', 6,'B');
INSERT INTO SEMSEC VALUES ('CSE6C', 6,'C');
INSERT INTO SEMSEC VALUES ('CSE5A', 5,'A');
INSERT INTO SEMSEC VALUES ('CSE5B', 5,'B');
INSERT INTO SEMSEC VALUES ('CSE5C', 5,'C');
INSERT INTO SEMSEC VALUES ('CSE4A', 4,'A');
INSERT INTO SEMSEC VALUES ('CSE4B', 4,'B');
INSERT INTO SEMSEC VALUES ('CSE4C', 4,'C');
INSERT INTO SEMSEC VALUES ('CSE3A', 3,'A');
```

```
INSERT INTO SEMSEC VALUES ('CSE3B', 3,'B');
INSERT INTO SEMSEC VALUES ('CSE3C', 3,'C');
INSERT INTO SEMSEC VALUES ('CSE2A', 2,'A');
INSERT INTO SEMSEC VALUES ('CSE2B', 2,'B');
INSERT INTO SEMSEC VALUES ('CSE2C', 2,'C');
INSERT INTO SEMSEC VALUES ('CSE1A', 1,'A');
INSERT INTO SEMSEC VALUES ('CSE1B', 1,'B');
INSERT INTO SEMSEC VALUES ('CSE1C', 1,'C');
Select * from SEMSEC;
```

```
INSERT INTO CLASS VALUES ('1RN13CS020','CSE8A');
INSERT INTO CLASS VALUES ('1RN13CS062','CSE8A');
INSERT INTO CLASS VALUES ('1RN13CS066','CSE8B');
INSERT INTO CLASS VALUES ('1RN13CS091','CSE8C');
INSERT INTO CLASS VALUES ('1RN14CS010','CSE7A');
INSERT INTO CLASS VALUES ('1RN14CS025','CSE7A');
INSERT INTO CLASS VALUES ('1RN14CS032','CSE7A');
INSERT INTO CLASS VALUES ('1RN15CS011','CSE4A');
INSERT INTO CLASS VALUES ('1RN15CS029','CSE4A');
INSERT INTO CLASS VALUES ('1RN15CS045','CSE4B');
INSERT INTO CLASS VALUES ('1RN15CS091','CSE4C');
INSERT INTO CLASS VALUES ('1RN16CS045','CSE3A');
INSERT INTO CLASS VALUES ('1RN16CS088','CSE3B');
INSERT INTO CLASS VALUES ('1RN16CS122','CSE3C');
Select * from CLASS;
```

```
INSERT INTO SUBJECT VALUES ('10CS81','ACA', 8, 4);
INSERT INTO SUBJECT VALUES ('10CS82','SSM', 8, 4);
INSERT INTO SUBJECT VALUES ('10CS83','NM', 8, 4);
INSERT INTO SUBJECT VALUES ('10CS84','CC', 8, 4);
INSERT INTO SUBJECT VALUES ('10CS85','PW', 8, 4);
```

```
INSERT INTO SUBJECT VALUES ('10CS71','OOAD', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS72','ECS', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS73','PTW', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS74','DWDM', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS75','JAVA', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS76','SAN', 7, 4);
INSERT INTO SUBJECT VALUES ('15CS51', 'ME', 5, 4);
INSERT INTO SUBJECT VALUES ('15CS52','CN', 5, 4);
INSERT INTO SUBJECT VALUES ('15CS53','DBMS', 5, 4);
INSERT INTO SUBJECT VALUES ('15CS54','ATC', 5, 4);
INSERT INTO SUBJECT VALUES ('15CS55','JAVA', 5, 3);
INSERT INTO SUBJECT VALUES ('15CS56','AI', 5, 3);
INSERT INTO SUBJECT VALUES ('15CS41','M4', 4, 4);
INSERT INTO SUBJECT VALUES ('15CS42','SE', 4, 4);
INSERT INTO SUBJECT VALUES ('15CS43','DAA', 4, 4);
INSERT INTO SUBJECT VALUES ('15CS44','MPMC', 4, 4);
INSERT INTO SUBJECT VALUES ('15CS45','OOC', 4, 3);
INSERT INTO SUBJECT VALUES ('15CS46','DC', 4, 3);
INSERT INTO SUBJECT VALUES ('15CS31','M3', 3, 4);
INSERT INTO SUBJECT VALUES ('15CS32','ADE', 3, 4);
INSERT INTO SUBJECT VALUES ('15CS33','DSA', 3, 4);
INSERT INTO SUBJECT VALUES ('15CS34','CO', 3, 4);
INSERT INTO SUBJECT VALUES ('15CS35','USP', 3, 3);
INSERT INTO SUBJECT VALUES ('15CS36','DMS', 3, 3);
Select * from SUBJECT;
```

```
INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1,
TEST2, TEST3) VALUES ('1RN13CS091','10CS81','CSE8C',
15, 16, 18);
```

```
INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1,
TEST2, TEST3) VALUES ('1RN13CS091','10CS82','CSE8C',
12, 19, 14);
```

```
INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1,
TEST2, TEST3) VALUES ('1RN13CS091','10CS83','CSE8C',
19, 15, 20);
```

```
INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1,
TEST2, TEST3) VALUES ('1RN13CS091','10CS84','CSE8C',
20, 16, 19);
```

```
INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1,
TEST2, TEST3) VALUES ('1RN13CS091','10CS85','CSE8C',
15, 15, 12);
```

```
Select * from IAMARKS;
```

----- List all the student details studying in fourth semester 'C' section.

```
SELECT S.*, SS.SEM, SS.SEC
FROM STUDENT S, SEMSEC SS, CLASS C
WHERE S.USN = C.USN AND
SS.SSID = C.SSID AND
SS.SEM = 4 AND SS.SEC='C';
```

Result Grid							
	USN	SNAME	ADDRESS	PHONE	GENDER	SEM	SEC
▶	1RN15CS091	SANTOSH	MANGALURU	8812332201	M	4	C

----- Compute the total number of male and female students in each semester and in each section.

```
SELECT SS.SEM, SS.SEC, S.GENDER, COUNT(S.GENDER)
AS COUNT
```

```

FROM STUDENT S, SEMSEC SS, CLASS C
WHERE S.USN = C.USN AND
SS.SSID = C.SSID
GROUP BY SS.SEM, SS.SEC, S.GENDER
ORDER BY SEM;

```

Result Grid				
Filter Rows:				
	SEM	SEC	GENDER	COUNT
▶	3	A	M	1
	3	B	F	1
	3	C	M	1
	4	A	F	1
	4	A	M	1
	4	B	M	1
	4	C	M	1
	7	A	F	1
	7	A	M	2
	8	A	F	1
	8	A	M	1
	8	B	F	1
	8	C	F	1

----- Create a view of Test1 marks of student USN '1BI15CS101' in all subjects.

```

CREATE VIEW STU_TEST1_MARKS_VIEW
AS
SELECT TEST1, SUBCODE
FROM IAMARKS
WHERE USN = '1RN13CS091';

```

Result Grid		
Filter Rows:		
	TEST1	SUBCODE
▶	15	10CS81
	12	10CS82
	19	10CS83
	20	10CS84
	15	10CS85



----- Categorize students based on the following criterion:

If FinalIA = 17 to 20 then CAT = 'Outstanding'

If FinalIA = 12 to 16 then CAT = 'Average'

If FinalIA < 12 then CAT = 'Weak'

Give these details only for 8th semester A, B, and C section students.

Result Grid						
		Filter Rows:		Export:	Wrap Cell Content:	
	USN	SNAME	ADDRESS	PHONE	GENDER	CAT
▶	1RN13CS091	TEESHA	BENGALURU	7712312312	F	WEAK
	1RN13CS091	TEESHA	BENGALURU	7712312312	F	WEAK
	1RN13CS091	TEESHA	BENGALURU	7712312312	F	WEAK
	1RN13CS091	TEESHA	BENGALURU	7712312312	F	WEAK
	1RN13CS091	TEESHA	BENGALURU	7712312312	F	WEAK